AMENDMENTS TO THE SPECIFICATION

All references to the pending application will refer to the published version at U.S. Patent Publication No. 2005/0120021.

Please replace paragraph [0024] with the following paragraph:

I. ILLUSTRATIVE ~~ILLSUTRATIVE~~ COMPUTING ENVIRONMENTS

Please replace paragraph [0040] with the following paragraph:

The other type of data store depicted in FIG. 2A is data warehouse 210. Data warehouse 210 illustratively contains data from database 201 arranged in a generally aggregated form. Data warehouse 210 may also contain data aggregations derived based on other aggregations[[,]] or based on data in database 201. The data in data warehouse 210 is generally organized to enhance the performance and speed of data retrieval and processing executed in association with business application 209. The fundamental underlying transaction data, however, is typically retrieved from database 201 as necessary for the performance various functions including aggregation manipulations. At least some of the data in data warehouse 210 is illustratively the same, or directly related to, data in database 201. Data warehouse 210 is illustratively configured to recognize on-line analytical processing (OLAP). In accordance with one embodiment, data warehouse 210 is an MS OLAP Server system as is available from Microsoft Corporation of Redmond, Wash. Other systems can be incorporated without departing from the scope of the present invention.

Please replace paragraph [0042] with the following paragraph:

The illustrated object model 200 incorporates notation that is commonly known as unified modeling language (UML). The notation shows a composition relationship between Order 204 and OrderLine 206. Thus, it indicates that the Order entity 204 is

composed of one or more OrderLine entities 206. Object model 200 also shows that Order 204 has an association with Customer ~~200~~ 202. Transactional data, such as values that correspond to the illustrated field properties for each object, is stored in database 201 and retrieved as necessary. It is to be recognized that object model 200 is a simple example for the purpose of illustration only.

Please replace paragraph [0069] with the following paragraph:

In accordance with one embodiment, the analysis of metadata store 1100 and the identification of navigation paths are ~~are~~ performed at run time. Accordingly, with the possible exception of input required for logic association navigations, user knowledge is generally not required to enable utilization of the navigation paths. The navigation paths are identified and provided to the user simply based on data relationships reflected in the data processing system.

Please replace paragraph [0076] with the following paragraph:

FIG. 12A illustrates a specialized model services system 1250 that takes, as inputs, a specification of focal points 1252, an object description 1254 and a set of persistent data store mappings 1256. System 1250 then produces a dimensional ~~dimensinal~~ model 1258 based on the inputs. FIG. 12A also illustrates an entity generator 1260 that generates a set of object (or entities), referred to herein as business intelligence entities (or BI entities) 1262, based on the dimensional model 1258.

Please replace paragraph [0078] with the following paragraph:

FIG. 12B illustrates the system shown in FIG. 12A, but in greater detail. In the example illustrated in FIG. 12B, the object model (e.g., object model 200 in FIG. 2B) is represented by object description 1254, and the mappings 1256 are

shown between the object model representation 1254 and the database representation 1264 (e.g., data in database 201 in FIG. 2A). FIG. 12B also shows dimensional model 1258 in greater detail. Dimensional model 1258 includes a Fact table 1266 along with a plurality of dimensions 1268 and 1270 (the Customer dimension and the Order dimension). Each dimension is formed of one or more tables. The dimensional model incorporates a star-oriented schema similar to that shown in FIG. 8. FIG. 12B also illustrates one embodiment of a set of BI entities 1262. In the example shown in FIG. 12B, the BI entities 1262 include a BIOrderFact entity 1270, a BIOrder entity 1272 and a BICustomer entity 1274. Entities 1272 and 1274 are related to entity 1270. It should be noted that FIG. 12B is a relatively simple example provided for the purpose ~~prupose~~ of illustration.

Please replace paragraph [0080] with the following paragraph:

Through model services 1250 and BI entity generator 1260, an object model is translated into a BI entity object model, which can also be referred to as a data warehouse object model. Generally speaking, the translation involves a transition from an OLTP UML object model to a multi-dimensional OLAP data warehouse object model. In accordance with one embodiment, relational mappings of the transition from the regular object model to the BI entity object model represent potential navigation ~~navigatin~~ paths, and are therefore added to metadata store 1100. For reference, the regular object model objects can be referred to as business entities, while the objects associated with the OLAP data warehouse object model can be referred to as BI entities.

Please replace paragraph [0082] with the following paragraph:

FIG. 13 is a flow illustration demonstrating generation of BI entity ~~entitiy~~ metadata for the described intelligent navigation services. First, in accordance with step 1301, model service system 1250 (FIGS. 12A and 12B) generates BI entities. Next, in accordance with step 1302, metadata 1304 is created based on the BI entities for the navigation service.

Please replace paragraph [0093] with the following paragraph:

Examples of the clients are now discussed, but these are examples only and do not limit the scope of the invention. Client 1502 is illustratively a client based in the Microsoft Business Framework (MBF) but could ~~by~~ be any other framework as well. The Microsoft Business Framework is a set of developer tools and software classes offered by Microsoft Corporation of Redmond, Wash. Client 1504 is illustratively a client based in Windows, an operating system offered by Microsoft Corporation, but could be based on any ~~otehr~~ other operating system as well. Client 1506 is illustratively based in Microsoft Office, a software package offered by Microsoft Corporation, but could be based on any other software package as well. Client 1508 is a more generic identifier representing a web-based client.

Please replace paragraph [0098] with the following paragraph:

Accordingly, a BAPI client includes an application that navigates information using BAPI. The BAPI, which will illustratively be exposed, is the principle interface implemented by a BAPI provider. A BAPI providers is an implementation of BAPI API: a BAPI client navigates to obtain a different information perspective via ~~vua~~ a BAPI provider. The framework can then be extended through implementation of future/other providers through the similar Request/Response object exchange format. There therefor can be type specific

BAPI providers (Hypermedia providers, BIPath providers, etc.). This can be done through implementation of BAPI in a provider specific manner to support custom Request/Response objects. The BAPI provider plugs itself into the BAPI provider manager and is used by the BAPI client in a delegation (if type is specified)/broadcasting pattern.

Please replace paragraph [0102] with the following paragraph:

Within FIG. 19, the providers are generically listed ~~listes~~ as providers 1940 (e.g., providers that provide navigation paths based on business entity information), providers 1930 (e.g., providers that provide navigation paths based on BI Entity enformation), and providers 1936 (e.g., other ISV providers including providers that provide navigation paths based on "other" sources).

Please replace paragraph [0107] with the following paragraph:

In accordance with one aspect of the present invention, as has been alluded to, as opposed to delegating a request for links to a suitable navigation provider, the request can instead be broadcast to multiple providers. In accordance with one embodiment, no navigation type is specified by a client in a broadcast request object. The clients do not specify a type so that the request will be broadcast ~~broadcatsted~~ to multiple providers (e.g., all registered providers). The providers that know ~~kow~~ about the request will illustratively respond while other providers will not. This is different than the "delegating" scenario.

Please replace paragraph [0108] with the following paragraph:

As was described above in relation to FIG. 14, the described process of intelligent data navigation also includes a user executing or traversing one particular link from the received aggregated ~~aggretated~~ list of links. FIG. 17, in

accordance with one aspect of the present invention, is a combination block-flow diagram illustrating the process of traversing one particular navigation link in association with the described system architecture~~archetecture~~.